

**Amendments to the Claims:**

The following listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended)      Crucible for a device for producing a block of crystalline material by directed crystallization, presenting side walls ~~(8)~~ and a bottom ~~(7)~~, the bottom ~~(7)~~ having, parallel to a direction substantially perpendicular to the bottom ~~(7)~~, much greater heat transfer properties than those of the side walls ~~(8)~~ along said direction, crucible ~~characterized in that~~ wherein the bottom ~~(7)~~ and side walls ~~(8)~~ are formed by materials having the same main chemical constituents.

2. (Currently Amended)      Crucible according to claim 1, ~~characterized in that~~ wherein the bottom ~~(7)~~ is transparent to infrared radiation, the side walls ~~(8)~~ being opaque to infrared radiation.

3. (Currently Amended)      Crucible according to claim 2, ~~characterized in that~~ wherein the bottom ~~(7)~~ is made of amorphous silica, the side walls ~~(8)~~ being made of opaque quartz ceramic.

4. (Currently Amended)      Crucible according to claim 1, ~~characterized in that~~ wherein the bottom ~~(7)~~ and side walls ~~(8)~~ are formed by plates made from the same material having anisotropic thermal conduction properties, the thermal conductivity of the plates, in the plane of the plates, being much lower than their thermal conductivity perpendicularly to this plane.

5. (Currently Amended) Crucible according to claim 4, ~~characterized in that~~wherein the crucible is made of graphite.

6. (Currently Amended) Crucible according to ~~any one of the claims 1 to 5~~claim 1, ~~characterized in that~~wherein the crucible comprises at least one coating ~~(11)~~ on at least one face of the side walls ~~(8)~~.

7. (Currently Amended) Crucible according to claim 6, ~~characterized in that~~wherein the material of the coating ~~(11)~~ is chosen from silicon nitride and reflecting materials.

8. (Currently Amended) Device for producing a block of crystalline material by directed crystallization, comprising a crucible arranged in an insulating enclosure ~~(2)~~ between heating means ~~(3)~~ arranged above the crucible and cooling means ~~(4)~~ arranged below the crucible, device ~~characterized in that~~wherein the crucible is a crucible according to ~~any one of the claims 1 to 7~~claim 1.

9. (Currently Amended) Device according to claim 8, ~~characterized in that it comprises~~comprising a graphite felt ~~(9)~~, arranged between the bottom ~~(7)~~ of the crucible and the cooling means ~~(4)~~, and compression means ~~(10)~~ to compress the graphite felt ~~(9)~~ during crystallization of the crystalline material.

10. (Currently Amended) Method for producing a block of crystalline material by directed crystallization, ~~characterized in that it uses~~using a device according to ~~any one of the claims 8 and 9~~claim 8, so as to define a temperature gradient comprised between 8°C/cm and 30°C/cm in the liquid phase.